

REMARKS

Claims 1-3 and 5-14 are pending in the above-identified application, with claim 1 being independent. Claims 2 and 8-14 have been withdrawn, and claim 4 has been canceled. For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art.

Claims Rejection Under - 35 U.S.C. § 103(a)

Claims 1, 3, and 5-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Number 5,581,363 (“Takahashi”) in view of U.S. Patent Number 5,715,104 (“Takada”). Applicants traverse this rejection for at least the following reasons.

Claim 1 recites a magnetic recorder/reproducer including input signal converting means for modulating an input signal at a timing which corresponds to a predetermined number of tracks for each signal section to thereby convert said input signal into a recording signal; and recording means for rotating a head cylinder at a rotational speed lower than such a rotational speed of said head cylinder that corresponds to said timing in said modulation, wherein said recording means sets a rotational speed of said head cylinder so that each signal section may be subdivided into such a number of deletion tracks that is obtained by dividing said predetermined number of tracks for each signal section by an integer smaller than said number of tracks.

To illustrate one non-limiting implementation, the application describes on page 21, line 14 to page 22, line 21 that

The modulating means 3 generates and provides the modulation output (2-c) in an output format of 10 tracks/frame that matches the general digital video signal standard . . . The modulation output (2-c) provided from the modulation means 3 is written by the write control means 5 into the storage memory 4. Specifically, the write control means 5 uses the signal processing H.SW signal (2-b) to control the write timing, so that modulation output (2-c) is written into the storage memory 4 as held in an output format of 10 tracks/frames that matches the general digital video signal standard.

The modulation output (2-c) written in the storage memory 4 is read out by the read control means 5 from the storage memory 4 and supplied to the recording/amplifying means 7. In this case, the read control means 6 uses the H.SW signal (2-d) to control the read timing. The H.SW signal (2-d) used here has been set to have half the frequency of the signal processing H.SW signal (2-b) (2.5 times the frequency of the frame signal (2-a)) . . . so that the modulation output (2-c) is read out from the storage memory not in an output format (10 tracks/frame) that matches the general digital signal standard but in a format of 5 tracks/frame, which matches the half frequency setting, and then is supplied to the recording/amplifying means 7.

This is different from the technology taught by Takahashi. In particular and as pointed out in the previously submitted response, Takahashi does not describe a recorder/reproducer that includes an input signal converting means for modulating an input signal to produce a modulated output signal having, for example, 10 tracks/frame as shown by reference numeral (2-c) in FIG. 2 of the present application and recording means for recording the modulated output signal given in an output format of 10 tracks/frame such that it is converted into a signal having 5 tracks/frame.

As such, Takahashi does not appear to describe or suggest a magnetic recorder/reproducer including input signal converting means for modulating an input signal at a timing which corresponds to a predetermined number of tracks for each signal section to thereby convert said input signal into a recording signal; and recording means [that] . . . sets a rotational speed of said head cylinder so that each signal section may be subdivided into such a number of deletion tracks that is obtained by dividing said predetermined number of tracks for each signal section by an integer smaller than said number of tracks, as recited in claim 1.

The Office Action disagrees and in response asserts that Takahashi teaches the above-recited features in column 1, lines 30-40 and 45-60. *See e.g.*, Office Action at page 2, lines 1-7. Applicants disagree. In column 1, lines 30-40, Takahashi merely discloses a method for recording a video signal comprising steps of: dividing the video signal during the horizontal scanning into 1/N, performing time expansion by a factor of N on the divided video signal, and successively recording on the magnetic tape the (N+1) signal. This, at best, suggests dividing an

input signal into multiple sections (e.g., dividing the input signal into frames) and recording the divided signal on the magnetic tape, and it does not suggest dividing each signal section (e.g., each frame) of the modulated signal by an integer smaller than number of tracks in each of the frames of the modulated signal.

That is, even if it is assumed that the cited prior art teaches input signal converting means for modulating an input signal to provide a modulating output having a predetermined number of tracks per frame (e.g., signal section) and further assume that the prior art teaches dividing the modulated output by an integer N, the prior art still does not teach that the integer N is smaller than the number of tracks/frame of the modulated output. Indeed, in Takahashi there is no mention that the integer N is related to the number of tracks/frame of the modulated signal.

As such, this portion of Takahashi does not appear to describe or suggest a magnetic recorder/reproducer including input signal converting means for modulating an input signal at a timing which corresponds to a predetermined number of tracks for each signal section to thereby convert said input signal into a recording signal; and recording means [that] . . . sets a rotational speed of said head cylinder so that each signal section may be subdivided into such a number of deletion tracks that is obtained by dividing said predetermined number of tracks for each signal section by an integer smaller than said number of tracks, as recited in claim 1.

Similarly, column 1, lines 30-40 of Takahashi also does not appear to describe or suggest the above-recited feature of claim 1. In column 1, lines 30-40, Takahashi merely describes a method for enabling a rotary drum to be made smaller and its rotational speed not increased that much by arranging four magnetic heads at equal interval around the rotary drum. This apparently enables recording on four tracks by four magnetic heads. As such, this portion merely teaches reducing the rotational speed of the drum by changing the number of magnetic

head and does not teach dividing the modulated output by an integer, much less teaching dividing the modulated output by an integer smaller than number of tracks in each section of the modulated output.

As such, this portion of Takahashi also does not appear to describe or suggest a magnetic recorder/reproducer including input signal converting means for modulating an input signal at a timing which corresponds to a predetermined number of tracks for each signal section to thereby convert said input signal into a recording signal; and recording means [that] . . . sets a rotational speed of said head cylinder so that each signal section may be subdivided into such a number of deletion tracks that is obtained by dividing said predetermined number of tracks for each signal section by an integer smaller than said number of tracks, as recited in claim 1.

For at least the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claim 1, along with its dependent claims.

Dependent Claims

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Because claim 1 is allowable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also allowable. In addition, it is respectfully submitted that dependent claims are allowable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are allowable over the cited prior art. Accordingly, it is respectfully requested that the rejection under 35 U.S.C. § 103 be withdrawn.

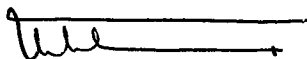
Conclusion

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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